

I strongly oppose broad-spectrum data over power lines. The largest single problem is reduction of radiation to acceptable limits would require the power line be nearly perfectly balanced, signal sources and loads to be nearly perfectly balanced, and every device or appliance connected to the power mains to be perfectly balanced at ALL frequencies produced by the system.

My own experience is devices that meet current FCC part 15 level requirements cause interference over large distances. For example, there are computers in farm use approximately one mile from me that increase my local noise floor by several dB over normal ambient noise. Switched mode power supplies are also a common problem, even though I live far from populated areas. In one case I had a switch mode power supply in a home computer located over 2 miles from me that produced multiple signals 25dB above local daytime noise floor.

Allowing use of power lines as part of a high-speed broad-spectrum digital system is unthinkable. It will have a devastating effect on radio systems used for emergency communications, as well as casual use systems.

Charles T. Rauch (RF Engineer)